

WHAT IS CLAIMED IS:

1. A contact hole forming method comprising the steps of:
providing a substrate;
5 forming a plurality of proper operation layers as required on said substrate;
forming a nitride layer on the uppermost layer of said operation layers;
forming photoresist on said nitride layer to define a position to be formed into a contact
hole;
forming the contact hole by etching; and
10 removing said nitride layer.
2. The method as claimed in Claim 1, wherein the step of removing said nitride layer is
performed by etching, and a corresponding portion of one of said operation layers not
removed in the step of forming the contact hole is removed simultaneously.
3. The method as claimed in Claim 2, wherein said one of said operation layers, of which
15 the corresponding portion is not removed in the step of forming the contact hole, is a nitride
layer.
4. The method as claimed in Claim 3, wherein said one of said operation layers, of which
the corresponding portion is not removed in the step of forming the contact hole, is a cap
nitride layer for a gate electrode.
- 20 5. The method as claimed in Claim 1, further comprising a step of using photoresist to
protect portions not to be eroded in said step of removing said nitride layer before the
removing step.
6. A gate contact hole forming method comprising the steps of:
providing a substrate;
25 forming a conducting layer on said substrate;
forming a gate metal on said conducting layer;
forming a cap nitride on said gate metal;
forming an oxide layer on said cap nitride;
forming a thin conducting layer on said oxide layer;

forming an additional nitride layer on said thin conducting layer;

forming photoresist on said additional nitride layer to define a position to be formed into a gate contact layer;

5 removing portions of said additional nitride layer, thin conducting layer and oxide layer corresponding to the position to be formed into the gate contact hole, and then removing the photoresist; and

removing a portion of said cap nitride corresponding to the position to be formed into the gate contact hole, and removing the additional nitride layer.

7. The method as claimed in Claim 6, wherein said conducting layer is a poly-silicon layer.

10 8. The method as claimed in Claim 6, wherein said thin conducting layer is a thin poly-silicon layer.

9. A method for forming contact holes including a gate contact hole and a non-gate contact hole, said method comprising steps of:

providing a substrate;

15 forming a plurality of operation layers on said substrate, the operation layers at the portion to be formed into the gate contact hole including at least a gate metal and a cap nitride layer formed on the gate metal;

forming a nitride layer on the upper most layer of the operation layers;

20 forming photoresist on said nitride layer to define positions to be formed into the respective contact holes;

removing portions of the respective operation layers corresponding to the position to be formed into the non-gate contact hole to form the non-gate contact hole and removing portions of the operation layers above the cap nitride layer corresponding to the position to be formed into the gate contact hole;

25 filling the non-gate contact hole with photoresist; and

removing the portion of the cap nitride layer corresponding to the position to be formed into the gate contact hole to form the gate contact hole and removing said nitride layer.